

Having thus described the invention, what is claimed is:

1. In an electrical connector assembly for mating with a mating connector,  
the electrical connector assembly including a housing, a slide assist member  
5 slideably supported on the housing to facilitate mating with the mating  
connector, and a lever pivotally connected with the housing, the lever including  
an arm connectable with the slide assist member for causing the slide assist  
member to slide from a pre-staged location to an engaged location with respect  
to the housing in response to the lever being pivoted from a pre-staged position  
10 to a engaged position relative to the housing, the improvement comprising:  
the slide assist member including a notch; and  
the arm including a protrusion which mates with the notch when the slide  
assist member is in the engaged location and the lever is in the engaged  
position, the protrusion being functional to interferingly abut the slide assist  
15 member and prevent movement of the lever from the pre-staged position to the  
engaged position when the lever is disconnected from the slide assist member  
and an attempt to move the lever from the pre-staged position to the engaged  
position does not correspondingly move the slide assist member from the pre-  
staged location to the engaged location.  
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2. The electrical connector assembly as recited in claim 1, wherein the  
protrusion generally forms a V-shape which extends along the lever arm.

3. The electrical connector assembly as recited in claim 2, wherein the tip of the V generally points toward a location where the lever pivotally connects with the housing.

5           4. The electrical connector assembly as recited in claim 3, wherein the notch generally has a V-shape for receiving the protrusion.

10           5. The electrical connector assembly as recited in claim 4, wherein the slide assist member has a first surface for abutment with the protrusion, the V-shaped notch being oriented such that the V-shape is slanted with respect to the first surface.

15           6. The electrical connector assembly as recited in claim 5, wherein the V-shaped notch includes a first side extending obliquely with respect to the first surface, as the first side extends from the tip of the "V" toward the first surface the first side slants toward a direction the slide assist member slides as it moves from the pre-staged location to the engaged location.

20           7. The electrical connector assembly as recited in claim 6, wherein the V-shaped notch includes a second side extending perpendicularly with respect to the first surface.

8. In an electrical connector assembly for mating with a mating connector, the electrical connector assembly including a housing having opposing walls and first and second slide assist members slideably supported on the opposing walls, each slide assist member including at least one mating slot adapted to receive a mating portion of the mating connector, the electrical connector assembly further including a lever pivotably interconnected with the housing, the lever including a first arm connectable with the first slide assist member and a second arm connectable with the second slide assist member, the lever being operable to move each of the slide assist members from a pre-staged location to an engaged location with respect to the housing to facilitate mating with the mating connector, the improvement comprising:

each of the first and second slide assist members including a first notch; and each of the first and second arms including a protrusion, each of which mates with the adjacent first notch when the slide assist member is in the engaged location and the lever is in the engaged position, when the lever is disconnected from at least one of the slide assist members and an attempt to move the lever from the pre-staged position to the engaged position does not correspondingly move the disconnected slide assist member from the pre-staged location to the engaged location, the protrusion functions to interferingly abut the adjacent disconnected slide assist member thereby preventing the lever from moving to the engaged position.

9. The electrical connector assembly as recited in claim 8, wherein each protrusion generally forms a V-shape which extends along the corresponding lever arm.

5           10. The electrical connector assembly as recited in claim 9, wherein the tip of the V generally points toward a location where the lever pivotally connects with the housing.

10           11. The electrical connector assembly as recited in claim 10, wherein each first notch generally has a V-shape for receiving the corresponding protrusion.

15           12. The electrical connector assembly as recited in claim 11, wherein each slide assist member has a first surface for abutment with the protrusion, the V-shaped first notch being oriented such that the V-shape is slanted with respect to the first surface.

20           13. The electrical connector assembly as recited in claim 12, wherein each V-shaped first notch includes a first side extending obliquely with respect to the first surface, as the first side extends from the tip of the "V" toward the first surface the first side slants toward a direction the slide assist member slides as it moves from the pre-staged location to the engaged location.

14. The electrical connector assembly as recited in claim 13, wherein each V-shaped first notch includes a second side extending perpendicularly with respect to the first surface.

5           15. The electrical connector assembly as recited in claim 8, wherein each slide assist member includes a second notch, each arm includes a boss for engaging the adjacent second notch for moving the corresponding slide assist member, the improvement further comprising each of the slide assist members including a channel extending parallel to a direction of sliding movement of the  
10       respective slide assist member, the channel being positioned to capture the corresponding boss when the protrusion abuts the disconnected slide assist member and to guide the boss to the second notch to enable the boss to reengage the second notch when the lever is moved back to the pre-staged position.

15           16. The electrical connector assembly as recited in claim 8, the improvement further comprising a connector position assurance lock mechanism operable to connect the lever to the housing when the lever is in the engaged position to prevent the lever from rotating to the pre-staged position.

20           17. The electrical connector assembly as recited in claim 16, the improvement further comprising the connector position assurance lock mechanism comprising a lock feature formed in the housing, the lock feature having a first cavity, an alignment feature formed in the lever, the alignment

feature having a second cavity, and a connector position assurance lock capable of extending through the first and second cavities when the lever is in the engaged position, the connector position assurance lock having a first surface for engaging the lock feature and a second surface for engaging the alignment  
5 feature.

18. A slide sensing mechanism for a slide member slideably supported on a structure and a lever pivotally connected with the structure, the lever being connectable with the slide member for causing the slide member to slide from a  
10 first location to a second location with respect to the structure in response to the lever being pivoted from a first position to a second position relative to the structure, the slide sensing mechanism comprising:

a notch formed in the slide member; and

a protrusion located on the lever, the protrusion mating with the notch when  
15 the slide member is in the second location and the lever is in the second position, the protrusion being functional to interferingly abut the slide member and prevent movement of the lever from the first position to the second position when the lever is disconnected from the slide member and an attempt to move the lever from the first position to the second position does not correspondingly  
20 move the slide member from the first location to the second location.

19. The slide sensing mechanism as recited in claim 18, wherein the protrusion generally forms a V-shape which extends along the lever.

20. The slide sensing mechanism as recited in claim 19, wherein the tip of the V generally points toward a location where the lever pivotally connects with the structure.

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21. The slide sensing mechanism as recited in claim 20, wherein the notch generally has a V-shape for receiving the protrusion.